CLAIMS

Amend the claims as follows.

1. (currently amended) A method for constructing a single stream of video data for transmission over a transmission channel, comprising:

accepting, at an input of a data transmitter, video data that has been encoded into a base layer and an enhancement layer;

~~selecting a pre-set average target data rate for transmitting video data into the transmission channel;~~

transmitting the base layer in a single stream to the transmission channel <u>in a first time period</u>;

~~recording bandwidth used by the transmission of the base layer;~~

<u>selecting a second time period for transmitting the enhancement layer, where the first time period is different from the second time period and where the second time period is selected based at least in part on a determination that there is available bandwidth for transmission of the enhancement layer in the second time period;</u>

transmitting the enhancement layer <u>in the second time period if there is available bandwidth</u>; ~~only if an average bandwidth already used by the data transmitter over a last measuring period is below the pre-set average target data rate~~ and then

ceasing the transmitting the enhancement layer responsive to accepting, at an input of ~~a~~ <u>the</u> data transmitter, data that has been encoded into a second base layer and a second enhancement layer.

2. (canceled)

3. (canceled)

4. (canceled)

5.   (currently amended) The method according to claim 1 <u>further comprising:</u>

<u>selecting a pre-set average target data rate for transmitting video data into the transmission channel;</u>

<u>recording bandwidth used by the transmission of the base layer;</u>

<u>transmitting the enhancement layer in the second time period only if an average bandwidth already used by the data transmitter over a last measuring period is below the pre-set average target data rate,</u> wherein the last measuring period is a predetermined period of time.

6.   (currently amended) The method according to claim ~~1~~ <u>5</u> wherein the last measuring period is a period in which a predetermined number of pieces of data have been transmitted over the transmission channel by the data transmitter.

7.   (original)   The method according to claim 1 wherein the data transmitter has a pre-set maximum transmission rate, and wherein the data transmitter ensures that its rate of transmitting data is below the pre-set maximum transmission rate.

8.   (currently amended) The method according to claim ~~1~~ <u>5</u> wherein the data is additionally encoded as a second enhancement layer, the method further comprising:

determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base and enhancement layers already transmitted by the data transmitter; and

transmitting the second enhancement layer only if an average bandwidth already used by the data transmitter over a last measuring period is below the pre-set average target data rate.

9.   (currently amended) The method according to claim 1 wherein <u>selecting the second time period for transmitting the enhancement layer further comprises waiting a pre-determined time period to make the determination that there is available bandwidth for transmission of the enhancement layer</u> ~~transmitting the base layer~~ on the transmission channel ~~comprises transmitting the base layer on a LAN connection between two or more computers.~~

10.　(original)　The method according to claim 1 wherein transmitting the base layer on the transmission channel comprises transmitting data from a media server to an image projector.

11.　(original)　The method according to claim 1 wherein transmitting the base layer on the transmission channel comprises transmitting data from a media server to a decoding device.

12.　(original)　The method according to claim 1 wherein determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base layer already transmitted comprises calculating at least two average bandwidths used by the data transmitter, each of the average bandwidths calculated over different measuring periods.

13.　(currently amended)　A multi-layer data transmission system, comprising:

a transmission scheduler having a first data input configured to accept an encoded base layer of data and an enhancement layer of data, and the transmission scheduler having an output terminal for providing selected data into a transmission channel; and

a scheduling operation controlling the transmission scheduler and configured to cause the transmission scheduler to send the base layer of data from the output terminal of the transmission scheduler when it is received, configured to determine a bandwidth during a first time period associated with sending the base layer, configured to determine if there is enough bandwidth during a second time period to send the enhancement layer of data responsive to determining the bandwidth associated with sending the base layer, configured to send the enhancement layer of data from the output terminal of the transmission scheduler if there is enough bandwidth to do so, and configured to cease sending the enhancement layer responsive to accepting a new encoded base layer of data and a new enhancement layer of data at the first data input of the transmission scheduler.

14.　(canceled)

15. (previously presented) The data transmission system according to claim 13, wherein there is enough bandwidth to send the enhancement layer if an average data transmission rate of the transmission scheduler is less than a predetermined rate.

16. (canceled)

17. (currently amended) A data transmission system for outputting a single coded video stream into a transmission channel, comprising:

an encoder having an input for receiving a single data stream and configured to encode the data stream into a base layer and at least one enhancement layer, where the encoder encodes all of the data received in the data stream independent of a rate control process for encoding data;

a transmission scheduler coupled to the encoder and having an input terminal to accept the encoded layers of data, and having an output terminal coupled to a transmission channel; and

a scheduling operation running on the transmission scheduler, configured to determine if there is sufficient bandwidth available in the transmission channel in a first time period to send the base layer over the transmission channel in the first time period, configured to signal the transmission scheduler to send the base layer of data from the output terminal of the transmission scheduler into the transmission channel after it is received, configured to determine if there is sufficient bandwidth available in the transmission channel in a second time period to send the enhancement layer over the transmission channel in the second time period, configured to signal the transmission scheduler to send the at least one enhancement layer into the transmission channel responsive to determining the bandwidth already used by the transmission scheduler sending the base layer, and configured to cease sending the at least one enhancement layer into the transmission channel responsive to accepting a new encoded layers of data at the input terminal of the transmission scheduler;

wherein the scheduling operation maintains an average target bandwidth outbound into the transmission channel, without regard to a current network load or state of congestion.

18. (cancel)

19.   (previously presented)   The data transmission system of claim 17 wherein the scheduling operation is configured to determine that there is enough bandwidth available to the transmission scheduler when an average bandwidth rate used by the transmission scheduler is less than the target bandwidth rate;

wherein the average bandwidth rate used by the transmission scheduler is determined by recording a number of bytes, and a time period during which those bytes were transmitted, for at least the base layer data transmission.

20.   (previously presented) The data transmission system of claim 17 wherein the scheduling operation is configured to determine that there is enough bandwidth available to the transmission scheduler when an instantaneous bandwidth rate on the transmission channel is below a predetermined rate.

21.   (original) The data transmission system of claim 17 wherein the scheduling operation is configured to determine whether there is enough bandwidth available to the transmission scheduler to send a first and a second of the at least one enhancement layers from the output terminal of the transmission scheduler.

22.   (original) The data transmission system of claim 21 wherein the scheduling operation is configured to determine whether there is enough bandwidth available to the transmission scheduler to send the first of the at least one enhancement layers from the output terminal of the transmission scheduler prior to determining whether there is enough bandwidth available to the transmission scheduler to send the second of the at least one enhancement layers.

23.   (withdrawn)   A method of generating a video image comprising:
receiving and decoding data that has been encoded into a base layer;
generating and displaying a video image responsive to the decoded base layer of data;
receiving and decoding data that has been encoded into an enhancement layer;
enhancing the quality of the video image responsive to the decoded enhancement layer of data.

24.   (withdrawn)   The method of claim 23 where data that has been encoded into the enhancement layer is received if a sufficient bandwidth is available to transmit the data.

25.   (withdrawn)   A multi-layer data receiving system, comprising a decoder configured to:

        receive and decode data that has been encoded into a base layer;

        receive and decode data that has been encoded into an enhancement layer;

     a viewer configured to:

        generate a video image responsive to the decoded data from the base layer; and

        enhance the quality of the video image responsive to the decoded data from the enhancement layer.

26.   (withdrawn) The system of claim 25 wherein data that has been encoded into an enhancement layer is received only under a favorable bandwidth condition.